be used in formulating a discount methodology for universal service support for schools and libraries. The NPRM noted that "[t]he methodology could reflect whether the services used are tariffed or whether the charges are for capital investments or recurring expenses."[1610] The NPRM also stated that "[t]he methodology could also be based on the incremental costs of providing services rather than retail prices."[1611] Moreover, the NPRM noted that "[s]ection 254(h)(1)(B) specifies that all discounts shall apply to 'the amounts charged for similar services to other parties.'"[1612] The NPRM sought comment and Joint Board recommendation on how those amounts might be determined.[1613] The Public Notice sought further comment on the discount methodology and asked whether the base service prices to which discounts would be applied should be: "(a) total service long-run incremental cost; (b) short-run incremental costs; (c) best commercially-available rate; (d) tariffed rate; (e) rate established through a competitively-bid contract in which schools and libraries participate; (f) lowest of some group of the above; or (g) some other benchmark."[1614] In addition, the Public Notice sought comment on how the commercially-available rate could best be ascertained, "in light of the fact that such rates may be established pursuant to confidential contract arrangements."[1615]

490. Further, the NPRM sought comment on how each discount methodology would conform with the mandate of section 254(b) to provide "specific, predictable and sufficient Federal and State mechanisms to preserve and advance universal service."[1616] The NPRM also sought comment and a Joint Board recommendation on how to harmonize state and federal discount methodologies to ensure that Congress's goal to provide access to advanced telecommunications services for elementary and secondary schools, classrooms, and libraries throughout the Nation is realized.[1617]

491. The NPRM sought comment on additional issues related to the discount methodology. First, the NPRM asked how to define "geographic area" for purposes of section

[1610] NPRM at para. 83.

[1611] NPRM at para. 83.

[1612] NPRM at para. 88.

[1613] NPRM at para. 88.

[1614] Public Notice at question 16.

[1615] Public Notice at question 16.

[1616] NPRM at para. 83 (*quoting* 47 U.S.C. § 254(b)(5)).

[1617] NPRM at para. 83.

254(h)(1)(B).[1618] Second, the NPRM noted that "[u]nlike all other universal service support, which is to be restricted to 'eligible telecommunications carriers" under the terms of section 214(e) of the Act . . . the offset or reimbursement provided under section 254(h)(1)(B), pertaining to schools and libraries, must be given to 'all telecommunications carriers serving a geographic area.'"[1619] The NPRM sought comment and Joint Board recommendation on how to implement these provisions.[1620] The NPRM also sought comment on the estimated costs associated with each proposed discount methodology.[1621]

492. The Public Notice sought further comment on several discounting issues, including whether discounts should be directed to the states in the form of block grants or direct billing credits, and if so, what, if any, measures should be implemented to ensure that the funds are used for their intended purposes.[1622] The Public Notice also sought comment on whether the cost estimates contained in the McKinsey Report and the KickStart Initiative provide an accurate funding estimate for schools and libraries, assuming that tariffed rates are used as the basis.[1623] Moreover, the Public Notice sought comment on whether other such cost estimates are available,[1624] and on whether there are cost estimates that specifically address the funding estimates for private schools.[1625]

493. The Public Notice sought further comment on several specific issues regarding the discount methodology. The Public Notice sought comment, first, on what discount should be applied, if any, for schools and libraries that are already receiving special rates,[1626] and, second, on whether schools and libraries located in rural, insular, high cost and economically disadvantaged areas should receive an additional discount.[1627] Third, the Public Notice asked whether the Commission should use a sliding-scale approach or a step approach to allocate

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[1618] NPRM at para. 80.

[1619] NPRM at para. 88.

[1620] NPRM at para. 88.

[1621] NPRM at para. 83.

[1622] Public Notice at questions 12, 13, and 14.

[1623] Public Notice at question 23.

[1624] Public Notice at question 24.

[1625] Public Notice at question 25.

[1626] Public Notice at question 17.

[1627] Public Notice at question 19.

any such additional discount.[1628] Finally, the Public Notice asked whether the Commission should use an existing model to determine the degree to which a school is disadvantaged, such as Title I or the national school lunch program, and whether the Commission should make modifications to any such existing model.[1629]

2. Comments

494. Setting a Pre-Discount Price. Numerous commenters suggest methods for determining a pre-discount price, which would serve as the base price to which a discount would be applied for schools and libraries. Ameritech advocates use of the rate charged to other subscribers,[1630] while BellSouth advocates a discount off the tariffed rate of a service.[1631] NSBA I proposes "a method that is based on the competitive market price or a surrogate for the competitive market price for each service (if no such price is readily ascertainable)."[1632] U.S. Distance Learning Ass'n advocates "calculating a discount from the lowest, competitive rate secured by the beneficiary institutions, presumably at a state-wide or even regional level."[1633] U.S. Distance Learning Ass'n supports using the lowest competitive interstate and intrastate telephone rates as a baseline.[1634]

495. To ensure that schools and libraries pay for the network elements they use, MCI contends that "the price of service for schools and libraries must reflect at least the capital costs of the plant used to provide the service."[1635] MCI contends that "the FCC should require that the actual economic cost of telecommunications services be the maximum rate charged by a telecommunications provider to any school or library before any discount is

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[1628] Public Notice at question 21.

[1629] Public Notice at question 20.

[1630] Ameritech comments at 17.

[1631] BellSouth comments at 19-20.

[1632] NSBA I comments at 19-21.

[1633] U.S. Distance Learning Ass'n comments at 14-15. *But see* EDLINC further comments at 28 (opposing a discount based on tariffed rates because it is likely "there will be no tariffs on which to base the discount" and because "the Commission does not conduct a quantitative analysis of tariffed rates").

[1634] U.S. Distance Learning Ass'n comments at 14-15.

[1635] MCI comments at 20. *See also* Syracuse University comments at 9-10 (asserting that "the Commission should adjust tariffs of qualified public institutions for all telecommunications services (whether intrastate or interstate) to reflect only the actual costs of providing service including a fair return on capital investments").

applied."[1636] MCI further maintains that the "actual economic cost" should be based on TSLRIC.[1637] EDLINC asserts that a national benchmark should be established, which "should be calculated based on the least of three possible rates: the price paid by schools and libraries in areas in which there is competition; the lowest commercially-available rate; and the TSLRIC."[1638]

496. Some commenters support basing the price of service for schools and libraries on competitive bids for serving aggregated sets of schools and libraries.[1639] NCTA, for example, believes that a competitive bid process in which the low bid represents a discount from prevailing market rates and in which the lowest bidder would become the provider of services with no entitlement to a subsidy "has major benefits in ease and economy of administration, and is pro-competitive, ensuring that the benefiting institutions have maximum choice."[1640] NCTA also proposes "use of a competitive bid process to ensure the lowest possible rate for schools and libraries in lieu of the suggested discount methodology," suggesting that no funded discount is necessary.[1641] NTIA also proposes using competitive bidding and a competitive rate when it is available. When competition does not exist, NTIA supports using the lowest commercial rate for similarly situated customers or, if that is not available, a cost-plus price.[1642] ACE, however, maintains that the 1996 Act does not permit the Commission to require that schools and libraries participate in a competitive bidding process, and that such a requirement "would constitute an unnecessary unfunded mandate with administrative costs to some schools and libraries being more than the anticipated annual cost of the requested telecommunications services."[1643]

497. Definition of "Geographic Area." Several commenters address the way in which "geographic area" should be defined for purposes of section 254(h)(1)(B). Washington Library, for example, suggests that, since the service areas of schools and libraries tend to

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[1636] *Connecting Students and Teachers to the Internet: An MCI Proposal* (June 27, 1996).

[1637] *Connecting Students and Teachers to the Internet: An MCI Proposal* (June 27, 1996).

[1638] EDLINC further comments at 27. *See also* Union City Board of Education reply comments at 12 (recommending that the price paid by schools and libraries should be the lower of "1. [t]he carrier's current rate or bid; 2. [t]he lowest price offered for such service to any other customer; or 3. [t]he TSLRIC").

[1639] Florida Cable comments at 14, 17; NCTA comments at 18; NSBA 1 comments at 22.

[1640] NCTA comments at 18.

[1641] NCTA comments at 18.

[1642] NTIA submission at 12-13.

[1643] ACE reply comments at 6.

overlap, "the summary of their areas might form the nucleus for determining the geographic area for receiving universal service support."[1644] Alaska Library maintains that "geographic area" should be defined as an entire state,[1645] while USTA asserts that "it should be interpreted to mean the service area in which the qualified educational institution or library is located."[1646] Oakland School District contends that "geographic area" should be defined as the LATA.[1647] NSBA I states that the Commission should not create geographic service areas in which schools and libraries will be required to obtain service from a particular carrier.[1648]

498. Definition of "Telecommunications Carriers Serving a Geographic Area." Other commenters address the entities that should be included within the definition of "telecommunications carriers serving a geographic area." Continental Cablevision, for example, asserts that any carrier, including those that do not provide "core" telecommunications services, should be considered a telecommunications carrier for purposes of providing advanced services to schools and libraries at a discount.[1649] Such a result will enhance competition in the provision of services to schools and libraries.[1650] Iowa Tel. Ass'n maintains that "private network providers (such as electric company networks or corporate networks) and state sponsored private networks (such as Iowa Communications Network) that do not provide services directly to the public should not be eligible for these support funds."[1651] U.S. Distance Learning Ass'n, on the other hand, states that the Iowa Communications Network and other specialized private or public carriers dedicated to providing telecommunications services to schools and libraries should be considered

[1644] Washington Library comments at 6-7.

[1645] Alaska Library comments at 6. *See also* ACE comments at 13 (asserting that "[i]n order to facilitate universal service fund administration . . . the applicable 'geographic area' should be each State or combination thereof").

[1646] USTA comments at 8 n.13. *See also* NCTA comments at 18 (asserting that "[t]he geographic area served by a particular company should be each company's self-defined service area").

[1647] Oakland School District comments at 10.

[1648] NSBA I reply comments at 16.

[1649] CCV comments at 13-14. *See also* Citizens Utilities comments at 20.

[1650] CCV comments at 13-14. *See also* Citizens Utilities comments at 20 (stating that "[s]ection 254(h)(1)(B)'s extension of universal service offsetting credits or reimbursement to all telecommunications carriers, not just Section 214(e) eligibles, should spur competition to provide service").

[1651] Iowa Tel. Ass'n comments at 4.

telecommunications carriers for the purposes of section 254(h)(1)(B).[1652]

499. Discounted Rate. In general, commenters suggest several different methods for determining what the "discount" should be for schools and libraries. ALA, for example, recommends that the discount rate for schools and libraries should be the "lower of the TSLRIC for the service or the lowest price offered commercially."[1653] ALA supports a discount price based on TSLRIC because that method "would ensure that the provider recovers its full cost, including the cost of capital."[1654] USTA, however, asserts that the use of TSLRIC should be rejected because "TSLRIC is not appropriate for pricing and is irrelevant to determine universal service support amounts."[1655] ACE maintains that the use of incremental cost in any form was considered and rejected by Congress when it substituted "rates less than" and "discount" language in section 254(h)(1)(B).[1656]

500. Other commenters suggest different methods for determining the discounted rate. For example, some schools and libraries groups, citing the need for predictability in the budgeting process, support a flat rate that is neither distance- nor time-sensitive.[1657] U.S. Distance Learning Ass'n suggests using the following discount rates as target: 45 percent discount on the lowest competitive interstate and intrastate telephone rates; 50 percent discount on installation of hardware necessary to access telecommunications services; and 50 percent discount for ongoing maintenance.[1658] NSBA I supports basing the discount price on the "95 percent affordability price point" (i.e., a price low enough to allow 95 percent of

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[1652] U.S. Distance Learning Ass'n reply comments at 7-8.

[1653] ALA reply comments at 3-9. *See also* Colorado Library reply comments at 3.

[1654] ALA reply comments at 3-9 (asserting that "[t]he true economic costs of supply for any market sector have been found to be the provider's TSLRIC"). *See also* AFT comments at 4 (asserting that "[u]sing a method for determining rates based on the Total Service Long Run Incremental Cost can substantially increase the cost savings to carriers and the larger schools they serve" because in urban areas with dense populations, "[t]elecommunications hook-ups to a single school will serve larger numbers of students and classrooms than in smaller schools").

[1655] USTA comments at 7.

[1656] ACE reply comments at 5.

[1657] *See, e.g.*, Mendocino School District comments at 4; Michigan Library Ass'n comments at 12 (stating that "[s]elected discount methodologies should be distance insensitive"); Oakland School District comments at 11 (asserting that "[s]chools should have flat-rate access to the network at the same cost as residential customers"). *See also* PacTel comments at 5-6 (stating that "[p]rices which vary by amount of usage and from month-to-month introduce an element of unpredictability that schools told us they could not tolerate").

[1658] U.S. Distance Learning Ass'n comments at 14-15.

schools to afford the rate) or, in the alternative, on TSLRIC.[1659] Great City Schools supports a declining rate based on the school's or library's ability to pay,[1660] while NECA proposes using mechanisms similar to those used for the Lifeline Assistance program to support discounted services for schools and libraries.[1661] Pennsylvania Library asserts that the discounted rate for schools and libraries should represent the wholesale price of the service.[1662] Sailor recommends that pre-1996 Act rates should be compared with post-1996 Act rates, so that it can be determined whether a genuine discount exists.[1663] Sprint, on the other hand, asserts that "at least in the schools and library context, it is premature to prescribe a discount methodology until the specified services, and most importantly the cost of implementing and provisioning such services, are determined."[1664]

501. EDLINC proposes basing the size of the discount on "two factors that determine affordability: the price of the service, and ability to pay."[1665] EDLINC maintains that the ability to pay is particularly important in low-income and rural areas, and proposes ranking school districts based on a combination of the lower of the median value of owner-occupied housing or median household income, plus population density.[1666] Based on its ranking, each school district would receive a minimum discount of 30 percent, and a maximum discount of 70 percent. EDLINC chooses median value of owner-occupied housing as the "best indicator of district wealth in non-inner city areas,"[1667] and median household income as "a better indicator of the relative ability to pay of an inner city area."[1668] EDLINC selects population density as a factor to apply to all districts "because of the lower potential

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[1659] NSBA I reply comments at 21-22.

[1660] Great City Schools comments at 2.

[1661] NECA comments at 15-17. *See also* Alliance for Distance Education comments at 1 (supporting equating each classroom and library to a low-income consumer unit, thereby entitling it to "an amount equal to rate 10 percent below the lowest rates offered by a telecommunications service provider to its lifeline customers or 20 percent below the lowest contract rates offered to corporations or institutions for a particular service, whichever rate is lower").

[1662] Pennsylvania Library Ass'n reply comments at 6.

[1663] Sailor comments at 15-19.

[1664] Sprint comments at 23.

[1665] EDLINC further comments at 29.

[1666] EDLINC further comments at 30.

[1667] EDLINC further comments at 30.

[1668] EDLINC further comments at 31.

sparsely populated areas have for recovering costs by spreading them out over the population as a whole," but acknowledges that the current density factor may have to be adjusted to accommodate extremely dense urban areas that may have substantial low-income populations.[1669] In terms of applying the discount percentage, EDLINC proposes having service providers submit competitive bids to schools and libraries. If the lowest bid is above the national benchmark proposed by EDLINC, or if there is only one bid, the discount will be calculated by applying the discount percentage to the national benchmark price. In the event of no bidders, the school or library can request service from the carrier of last resort, and the discount will also be calculated by applying the discount percentage to the national benchmark price. If the lowest competitive bid is below the national benchmark price, the discount will be calculated by applying the discount to the bid price.[1670]

502. Some commenters recommend providing selected telecommunications services at no cost to schools and libraries (i.e., give them a 100 percent discount). United States Secretary of Education Richard Riley, Vice President Al Gore, and United States Representative Edward Markey have proposed free "basic" service rates and highly discounted rates for advanced services, which they refer to as "E-rates."[1671] Benton asserts that, to ensure affordable telecommunications services for schools and libraries, it may be necessary to provide free services.[1672] NYNEX, however, contends that the 1996 Act contemplates discounted, rather than free services, and that providing such free services may encourage wasteful purchases.[1673]

503. NTIA proposes that services be split into two categories, with the discount for a specific service determined by the category into which the service falls. In the first category of services, NTIA recommends providing a basic package of services, which would include basic connectivity and Internet access at a maximum bandwidth of 1.5 Mbps, at the

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[1669] EDLINC further comments at 31.

[1670] EDLINC further comments at 31-32.

[1671] *See* Letter from Vice President Al Gore to Secretary Richard Riley (June 26, 1996); Statement of Richard W. Riley, U.S. Secretary of Education, Press Conference on Free Access to the Internet (June 27, 1996); Statement of United States Representative Edward J. Markey, *Schools Need Free "E-Rate" to Educate for 21st Century* (June 27, 1996). *See also* U.S. Distance Learning Ass'n comments at 13-14 (stating that "the Commission should require telecommunications service providers to both install and deliver free of charge at least one voice-grade, curricular-purpose line to each such eligible institution").

[1672] Benton reply comments at 9.

[1673] NYNEX reply comments at 17.

"E-rate" (i.e., free to eligible schools and libraries).[1674] The price for this basic package would be established through several possible means, which are intended to obtain a competitive price. The package could, for example, be competitively bid. If, on the other hand, there are no bidders because there are no competitors to the ILEC, a bid ceiling value could be established based on competitive prices in other locations, or could be based on economic costs, including a reasonable profit margin, to simulate a competitive result.[1675] NTIA expects that schools and libraries will include the non-telecommunications components of a technology plan, such as competing architectures or technologies, in their competitive bids, which will enable technological innovations to drive down the cost of the basic service package.[1676] NTIA proposes that carriers would be reimbursed for the basic package from universal service support mechanisms.[1677]

504. In the second category of services, NTIA proposes that all other telecommunications services would be provided to eligible schools and libraries at rates no greater than the best available commercial rate.[1678] Schools and libraries that chose not to subscribe to the basic package of services could apply the cost of the basic package to their total purchase of special or advanced services, and that amount would be recovered by its chosen carrier from universal service support mechanisms.[1679] Low income and high cost schools and libraries would be eligible for a deeper discount, based on an "affordability index."[1680] For these other telecommunications services, carriers would only be reimbursed from universal service support mechanisms for the cost of the deeper discount.[1681]

505. Cost Estimates. To establish what level of support is appropriate and

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[1674] NTIA submission at 9. Basic connectivity would include "both installation and monthly rates for external access, and the inside connections and 'networking' required to ensure that at least one personal computer (located in an area accessible to students) is on-line," and Internet access would include E-mail and the resources of the World Wide Web. *Id.* at 10.

[1675] NTIA submission at 12.

[1676] NTIA submission at 12. *See also* Teleport *ex parte* filing (Sept. 26, 1996) (proposing that telecommunications services that are included within a basic package would be competitively bid, and other components of the technology configuration could be included).

[1677] NTIA submission at 12-13.

[1678] NTIA submission at 13-14.

[1679] NTIA submission at 14.

[1680] NTIA submission at 13-14.

[1681] NTIA submission at 15.

necessary, the Commission must estimate a baseline cost for what schools and libraries are likely to spend as they secure access to the Internet, engage in distance learning applications, use video conferencing, and purchase whatever other telecommunications and information services they find useful for achieving their educational purposes. The most comprehensive estimate, on the record, of the costs of providing schools with the services proposed by Congress in section 254(h) is provided by *K-12 Schools to the Information Superhighway,"* ("McKinsey Report") prepared by McKinsey & Company, a management consulting firm, for the National Information Infrastructure Advisory Council (NIIAC).[1682]

506. The McKinsey Report estimates the costs for four models of computer-based infrastructures: basic lab; lab plus; partial classroom; and full classroom. The basic lab model assumes that every school will install connections for 25 computers in a single room served by an Ethernet LAN in the lab and ten telephone lines to the public network. The lab plus model would include all components of the lab model plus one computer and modem per teacher. The partial classroom model would include one computer per every five students for half of the classrooms in each school, served by an Ethernet LAN across and within all classrooms and a T-1 connection to the public network.[1683] The full classroom model would include all of the components of the partial classroom model for every classroom.

507. The McKinsey Report estimates both initial and ongoing costs for six categories of costs: connection to the school, connection within the school, hardware, content, professional development, and systems operation,[1684] but only the first two categories are costs of providing non-content conduits for transmitting data, and have been identified by parties as relevant to the establishment of universal service mechanism and competitively neutral rules under section 254(h) of the 1996 Act.[1685] The estimated (initial/ongoing) costs for connections to the schools according to each of the four models are: lab ($815/$580 million), lab plus

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[1682] The National Information Infrastructure Advisory Council (NIIAC) was created by executive order at the end of 1993 and formally established and appointed in early 1994. The 37 member advisory panel represents many of the key constituencies with a stake in the NII, including private industry, state and local governments, community, public interest, education, and labor groups, creators and distributors of content, privacy and security advocates, and leading experts in NII-related fields. The NIIAC is responsible for advising the Secretary of Commerce and the Administration on a national strategy for promoting the development of the NII and the Global Information Infrastructure (GII). *See* Russell Rothstein, *Networking K-12 Schools: Architecture Models and Evaluation of Costs and Benefits* 25 n.9 (1996) (unpublished masters thesis, Massachusetts Institute of Technology). McKinsey cost information was also integrated into a report published by the U.S. Advisory Council on the National Information Infrastructure. *See KickStart Initiative: Connecting America's Communities to the Information Superhighway* (1996).

[1683] McKinsey and Company, *Connecting K-12 Schools to the Information Superhighway* at 20-25 (1995).

[1684] McKinsey and Company, *Connecting K-12 Schools to the Information Superhighway* at 57 (1995).

[1685] 47 U.S.C. § 254(h).

($1,345/$595 million), partial classroom ($1,715/$1,030 million), and full classroom ($1,645/$920 million). The estimated costs for internal connections are: lab ($1,325/$200 million), lab plus ($1,325/$200 million), partial classroom ($5,025/$410 million), and full classroom ($6,285/$570 million). The estimated total costs for these models are: lab ($10.6/$3.9 billion), lab plus ($21.8/$7.4 billion), partial classroom ($28.9/$7.5 billion), and full classroom ($46.8/$13.9 billion). These figures assume a five year deployment period for the first three models and a ten year deployment for the full classroom model. As these data indicate, the combined total of the categories of the internal and external connections represents about 18 percent of the total initial costs of the models and 15 percent of the ongoing costs.[1686] Those costs are the identified base which we will consider in implementing section 254(h). Therefore, schools will have to depend on other sources to provide the additional 80-plus percent of funding.

508. The McKinsey Report makes a number of assumptions to reach its estimates. It assumes, for example, that 27 percent of connections to the school and 50 percent of internal connections would be provided via wireless radio, as the most cost-effective technology. It also assumes that seven-percent of schools already have internal connections in place. The services are priced at tariffed rates, although McKinsey assumes that the price of many elements will decline over time.[1687]

509. The record also includes Russell Rothstein's May 1996 master's thesis entitled, *Networking K-12 Schools: Architecture Models and Evaluation of Costs and Benefits.*[1688] In his thesis, Rothstein estimates a range of costs for five different models of school access: single PC dial-up; local area network (LAN) with shared modem; LAN with router; LAN with local server and dedicated line; and ubiquitous LAN with high-speed connection. He states that his results are consistent with the McKinsey models. Furthermore, Rothstein disaggregates the cost of access to the Internet and estimates that cost at between $150 and $630 million per year.[1689]

510. The *KickStart Initiative: Connecting America's Communities to the Information*

[1686] McKinsey and Company, *Connecting K-12 Schools to the Information Superhighway* at 28 (1995).

[1687] McKinsey and Company, *Connecting K-12 Schools to the Information Superhighway* at 54-59 (1995).

[1688] Russell Rothstein, Networking K-12 Schools: Architecture Models and Evaluation of Costs and Benefits (1996) (unpublished masters thesis, Massachusetts Institute of Technology).

[1689] Russell Rothstein, Networking K-12 Schools: Architecture Models and Evaluation of Costs and Benefits, at 50 (1996) (unpublished masters thesis, Massachusetts Institute of Technology).

Superhighway ("KickStart Initiative"),[1690] produced by the United States Advisory Council on the National Information Infrastructure, incorporates data from the McKinsey Report on schools, estimates the cost of providing service to the libraries in the nation.[1691] It estimates the cost of providing T-1 connections to libraries serving populations of more than 25,000, while 60 percent of libraries serving populations of less than 25,000 would have access to ISDN lines (56 to 128 kbps service) and 40 percent would have access to ordinary voice lines.[1692] It estimates the total initial cost to libraries at $1.6 billion and $1.3 in ongoing costs. It also estimates that the costs of connections to the library would represent 4 percent of the total initial and 9 percent of total ongoing costs and that internal connections would represent 17 percent of initial costs and 3 percent of ongoing costs.[1693]

511. NCLIS submitted its June 1995 report entitled *Internet Costs and Cost Models for Public Libraries.*[1694] The report describes five Internet connectivity models: (1) single workstation, text-based; (2) single workstation, multimedia; (3) multiple terminals, text-based; (4) multiple workstations, multimedia, with existing LAN and OPACs; and (5) multiple libraries, multiple workstations, multimedia.[1695] NCLIS estimates the cost of model 4, which would include providing T-1 connections and Internet access with an existing LAN and online public access catalog system, at $7,475 in initial costs and $27,220 in ongoing annual costs (i.e., primarily Internet access) per library.[1696]

512. Several commenters maintain that it is important to establish the size of the universal service fund.[1697] In the same way that schools and libraries require predictability in

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[1690] The United States Advisory Council on the National Information Infrastructure was created by executive order at the end of 1993 by President Clinton. The 36-member advisory panel was formally established and appointed by the Secretary of Commerce in early 1994. This report was published in January 1996.

[1691] KickStart Initiative at 94-98.

[1692] KickStart Initiative at 97.

[1693] KickStart Initiative at 96.

[1694] NCLIS, *Internet Costs and Cost Models for Public Libraries, Final Report* (June 1995).

[1695] NCLIS, *Internet Costs and Cost Models for Public Libraries, Final Report* 15-22 (June 1995).

[1696] NCLIS, *Internet Costs and Cost Models for Public Libraries, Final Report* 26-27 (June 1995).

[1697] *See, e.g.,* BellSouth further comments at 31; SWBT further comments at 18; USTA further comments at 18.

the budgeting process,[1698] service providers must have a sense of what they need to contribute towards universal service support. It may be necessary, according to several commenters, to make adjustments to the fund, consistent with the 1996 Act.[1699]

513. Some commenters assert that the cost estimates provided in the McKinsey Report and the KickStart Initiative provide reasonable bases to estimate funding for schools and libraries.[1700] USTA, for example, states that the McKinsey Report and the KickStart Initiative represent the best available estimates of the funding necessary for schools and libraries."[1701] In terms of private schools, several commenters assert that McKinsey's per-school estimates can be extrapolated to include private schools.[1702] Other commenters maintain that there are flaws in the McKinsey Report and the KickStart Initiative.[1703] Oakland School District asserts that the estimated costs and prices are likely to change once competition takes hold.[1704] ALA contends that, while the KickStart Initiative may provide some useful guidance for funding, the cost estimates are based on misleading assumptions of what small and rural libraries need, as well as the services those libraries need to provide.[1705] ALA suggests, alternatively, the use of its simplified cost model which estimates "ongoing connectivity costs only" (i.e., data connections for Internet-type service only).[1706]

514. Limitation on Funds. Some commenters support a limit on the amount of money available to schools and libraries under section 254. TCI, for example, recommends that the Commission limit the amount of the discount required for schools and libraries so that

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[1698] *See* PacTel comments at 5-6 (asserting that "[p]rices which vary by amount of usage and from month-to-month introduce an element of unpredictability that schools told us they could not tolerate").

[1699] *See, e.g.*, BellSouth further comments at 31; USTA further comments at 18.

[1700] *See, e.g.*, BellSouth further comments at 30-31; GTE further comments at 26; SWBT further comments at 18; USTA further comments at 17-18.

[1701] USTA further comments at 17-18.

[1702] *See, e.g.*, BellSouth further comments at 31; MCI further comments at 11. *See also* TCI further comments at 20-21 (stating that the McKinsey estimates are accurate, but recommending that "those estimates be altered for the use of TS-LRIC costs determined by an appropriate proxy model").

[1703] *See, e.g.*, ALA further comments at 18-19; Information Renaissance further comments at 10; Oakland School District further comments at 10.

[1704] Oakland School District further comments at 10.

[1705] ALA further comments at 18-19.

[1706] ALA further comments at 19-22.

the discount does not go beyond the requirements of the 1996 Act.[1707] Florida PSC supports a maximum dollar limit on expenditures for schools and libraries.[1708] Teleport asserts that there should be an initial limit on funds for the first year and a cap on funds in the third year, pending further review of the discount program.[1709]

515. Block Grant Approach. The block grant approach would provide a specified quantity of money to states, to be disbursed among the various schools and libraries for their purchases of telecommunications services. Ameritech, for example, asserts that the use of block-grants could be a "reasonable approach" to fulfilling the statutory requirements applicable to schools and libraries.[1710] GTE states that the use of block grants "could satisfy the requirements of the 1996 Act, be administratively feasible, and enable the entire process to be managed in an efficient and consistent manner."[1711] Most commenters, however, oppose the block grant approach and state that the 1996 Act contemplates discounted rates for schools and libraries.[1712] Parties opposing the block grant approach state that such an approach would create bureaucratic problems,[1713] would make it impossible to determine affordability,[1714] and would distort the competitive services market.[1715] The Senate Working Group, a bipartisan group of 16 Senators that includes the co-authors of section 254(h), states:

> We are seriously concerned about the issue of block grants. Such grants would be incompatible with the statute's architecture of discounts based on affordability on flexible *bona fide* requests submitted by schools and libraries. Block grants are not based on individual needs and priorities of schools and libraries for education

[1707] TCI comments at 20-21.

[1708] Florida PSC reply comments at 6-7.

[1709] Teleport *ex parte* filing (Sept. 26, 1996).

[1710] Ameritech further comments at 17.

[1711] GTE further comments at 18.

[1712] *See, e.g.*, ALA further comments at 12; EDLINC further comments at 20-21; Illinois State Library further comments at 3; NECA further comments at 9; Senate Working Group further comments at 2; Time Warner further comments at 23; Union City Board of Education further comments at 2, 9.

[1713] *See, e.g.*, ALA further comments at 12; New York DOE further comments at 7; Puerto Rico Tel. Co. further comments at 6-7.

[1714] Senate Working Group further comments at 2.

[1715] AT&T further comments at 14.

> technology. Affordability cannot be determined under a block grant approach. It is imperative that the Commission and the Joint Board structure discounted rates for schools and libraries in such a way that all schools and libraries will have access to telecommunications services. We believe that a block grant approach cannot satisfy the objectives of [s]ection 254(h).[1716]

516. Funds to Schools Approach. Whereas the block grant proposals would allocate a set amount of money to be disbursed among various schools and libraries, NYNEX proposes a formula for computing the amount of money available for each school and library to be used as discounts toward the purchase of telecommunications services. NYNEX's Education Plan would compute funding based on a determination of the nationwide average cost of providing information technology access on a per student basis. This calculation would be established as a benchmark price that would be used as the basis for establishing a benchmark discount. Each school and library would develop a proposal for telecommunications services procurement that would be reviewed and/or approved by a state administrator for compliance with an advisory council's guidelines.[1717] Telecommunications service providers would obtain the funding associated with the discounts from universal service support mechanisms, with the balance billed to the school or library.[1718]

517. NYNEX clarifies that data should be disaggregated between urban and rural areas for both the benchmark prices and discounts, to account for the differences in costs between urban and rural areas in acquiring similar telecommunications capabilities. By varying the discounts between urban and rural areas, schools and libraries located in rural and urban areas could be assured of obtaining services at the same price. Under this proposal, schools and libraries would not be in competition with one another for the funds representing the discounts.[1719]

518. Direct Billing Credits Approach. Some commenters assert that providing direct billing credits from service providers to schools and libraries would be a simple and direct method of providing support to schools and libraries.[1720] Most commenters supporting this

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[1716] Senate Working Group further comments at 2.

[1717] *See infra* section X.E. for discussion of an Education Council.

[1718] NYNEX comments at 21-23 and reply comments at 14-18.

[1719] NYNEX reply comments at 16.

[1720] *See, e.g.,* Ameritech further comments at 18; Bell Atlantic further comments at 4; Information Renaissance further comments at 8; NCTA further comments at 5; NYNEX further comments at 10-11; Netscape further comments at 14; New York DOE further comments at 8; PacTel further comments at 20.

approach anticipate that direct billing credits will be used in conjunction with discounts.[1721] Other commenters assert that the 1996 Act specifies discounts as the appropriate mechanism for providing support to schools and libraries, and that discounts and credits are not one and the same.[1722]

519. Schools and Libraries Located in High Cost Areas. Numerous commenters advocate providing additional support to schools and libraries located in high cost areas.[1723] Senate Working Group asserts that, in determining the level of federal universal support for schools and libraries, the Commission must consider what schools and libraries in high cost areas can reasonably afford.[1724] In a letter to the Joint Board, a group of 26 Senators stated that "discounts must . . . consider if the school or library is in a rural or high cost area and ensure affordable access for all eligible schools and libraries."[1725]

520. In suggesting that schools and libraries in high cost areas ought to receive a greater discount, several parties focus on the additional toll costs that rural schools and libraries may incur relative to urban schools and libraries.[1726] California Library Ass'n asserts that, in some rural areas, libraries may provide the sole public access point to electronic information resources,[1727] and that access to advanced telecommunications services in remote

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[1721] *See, e.g.,* NCTA further comments at 5; NYNEX further comments at 10-11.

[1722] *See, e.g.,* ALA further comments at 12; Colorado State Library further comments at 9; EDLINC further comments at 22-23; Great City Schools further comments at 3-4.

[1723] *See, e.g.,* Union City Board of Education reply comments at 12; ALA further comments at 16-17; AirTouch further comments at 18-19; California Library Ass'n further comments at 5; Colorado State Library further comments at 10; Illinois State Library further comments at 4-5; Maryland DOE further comments at 10-11; NECA further comments at 12; National Coalition for the Homeless further comments at 8-9; PacTel further comments at 25-26; U S West further comments at 11; NTIA submission at 14-16.

[1724] Senate Working Group further comments at 2-3.

[1725] Letter from 26 Senators to Members of the Joint Board (Sept. 26, 1996).

[1726] *See, e.g.,* BellSouth further comments at 28; Bell Atlantic further comments at 6; Illinois State Library further comments at 4-5; NECA further comments at 12; PacTel further comments at 26; Washington SPI further comments at 2.

[1727] California Library Ass'n further comments at 5. *See also* ALA further comments at 16-17 (stating that "ALA urges strongly that deep discounts be provided for such areas, where often, libraries and schools are the key, perhaps even the only public access points to electronic information resources").

areas is both expensive and difficult to obtain.[1728] NCLIS notes that significant disparities exist in the types of service
available to libraries based on the size of the population and the region in which libraries are located. For example, NCLIS research indicates that while approximately half of the libraries serving populations of 500,000 or more have T-1 connectivity to the Internet, very few libraries serving populations of less than 50,000 have T-1 connectivity.[1729] NCLIS advocates providing additional support to schools and libraries in high cost areas to correct such disparities.[1730]

521. ALA advocates providing additional support for schools and libraries in high cost areas because "[p]roviding incentives for these institutions to get on-line and for the carriers to provide service will promote broad public access (the ultimate goal of all universal service), as well as hasten the widespread deployment of high-end services."[1731] ALA also notes that telecommunications costs for libraries in high cost areas represent a much higher percentage of overall library budgets than for libraries in lower cost areas.[1732] Great City Schools asserts that whether additional discounts are provided to schools and libraries in high cost areas should be a federal determination, rather than a decision left to state public utility commissions.[1733] Century and TDS Telecom contend that discounts to schools located in high cost areas "must be 'sufficient' to place them in a position to obtain services and access (e.g., Internet) reasonably comparable to what their urban counterparts are able to obtain - and at reasonably comparable rates."[1734] MAP supports basing rates for schools and libraries on the ability to pay by first applying a sliding- scale concept of affordability, based on income

[1728] California Library Ass'n further comments at 5. *See also* NECA further comments at 12 (explaining that additional discounts may be necessary for schools and libraries in rural, insular, and high cost areas because of long transport mileage and/or toll charges, as well as the difficulties in providing advanced services to such areas).

[1729] NCLIS further comments at 6.

[1730] NCLIS further comments at 6. *See also* Pennsylvania Library Ass'n reply comments at 6 (advocating additional support for schools and libraries in high cost areas to overcome obstacles such as distance and poor infrastructure).

[1731] ALA further comments at 16-17.

[1732] ALA comments at ii.

[1733] Great City Schools further comments at 4.

[1734] Century further comments at 14. *See also* MAP comments at 7 n.1 (in discussion of support for schools and libraries located in high cost areas, noting that "[s]ection 254(b)(3) requires that rates in rural, insular, and high cost areas be reasonably comparable to rates charged for similar services in urban areas").

levels in a particular area. Discounts would then be applied on top of the sliding-scale rates.[1735] ALA and the Illinois State Library assert that schools and libraries located in areas that are both high cost and economically disadvantaged should benefit from two sets of additional discounts.[1736]

522. EDLINC acknowledges that the discount formula it proposes may not be sufficient for certain high cost school districts, so it proposes "that each state PUC have the authority to order lower discounts if a district is able to demonstrate that the standard discount . . . does not yield an affordable price."[1737] If a school's telecommunications expenditures exceed one percent of its total expenditures, EDLINC asserts that the school should be eligible for an additional discount, in an amount to be determined by the state PUC. Federal universal service mechanisms would fund two-thirds of the additional discount, and state universal service mechanisms would fund the remaining one-third.[1738]

523. Several commenters oppose providing additional support to schools and libraries located in high cost areas.[1739] Ameritech, for example, contends that the 1996 Act does not provide for such an additional level of discount.[1740] Information Renaissance sees no need for an additional discount.[1741] AT&T maintains that no additional discount should be provided, and states that if the best commercial rate in a rural area is considered excessive, the affected schools and libraries could request the best commercial rate in an urban area within the state.[1742] MFS believes that "generic high-cost support" is sufficient for schools and libraries located in high cost areas, and that an additional discount is not appropriate.[1743]

[1735] MAP further comments at 7.

[1736] ALA further comments at 16 (stating that "[i]n the case in which a region is both high-cost and low-income, these additional discounts should be combined"); Illinois State Library further comments at 4 (asserting that "additional discounts should be given to both rural and economically disadvantaged areas with an additional discount provided to schools and libraries that are located in areas that are both rural and economically disadvantaged").

[1737] EDLINC further comments at 38.

[1738] EDLINC further comments at 38-39.

[1739] *See, e.g.,* AT&T further comments at 16; Ameritech further comments at 21; Information Renaissance further comments at 9-10; MFS further comments at 31-32; NCTA further comments at 6; TCI further comments at 18; Time Warner further comments at 24-26.

[1740] Ameritech further comments at 21.

[1741] Information Renaissance further comments at 9-10.

[1742] AT&T further comments at 16.

[1743] MFS further comments at 31-32.

Time Warner asserts that an additional discount is not necessary because schools and libraries in high cost areas will be eligible for general high cost universal support as well as the discount that will be available to schools and libraries regardless of location.[1744] Washington UTC maintains that the 1996 Act does not mandate additional discounts for schools and libraries in high cost areas, and that "expansion of universal service funding on this basis is not consistent with the goal of limited, targeted support, or of allowing competition to work."[1745]

524. Time Warner asserts that an additional discount is not necessary because schools and libraries in high cost areas will receive the benefit of general high cost universal service support for these areas, as well as the discount that will be available to schools and libraries regardless of location.[1746] Time Warner further observes that many states have begun regulatory initiatives that benefit schools and libraries, and suggests that the federal universal service support mechanism should complement, rather than duplicate, such state efforts and should be structured in a competitively neutral manner.[1747]

525. Economically Disadvantaged Schools and Libraries. Numerous commenters support providing additional assistance to disadvantaged schools and libraries.[1748] National Coalition for the Homeless states that recent statistics indicate that the gap between access to telecommunications services afforded to rich and poor students continues to widen.[1749] Public Advocates notes that NetDay '96, a California program aimed at wiring the state's 13,000 schools for access to the Internet, failed to reach poor schools in Los Angeles.[1750] AFT states

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[1744] Time Warner further comments at 24-25.

[1745] Washington UTC further comments at 13.

[1746] Time Warner further comments at 24-25.

[1747] Time Warner further comments at 24-25.

[1748] *See, e.g.,* AFT comments at 3-4; New Jersey Advocate comments at 22; U.S. Distance Learning Ass'n comments at 15-16; ALA further comments at 16-17; AirTouch further comments at 18-19; CFA further comments at 10-11; California Library Ass'n further comments at 5; Illinois State Library further comments at 4-5; National Coalition for the Homeless further comments at 8-11; U S West further comments at 11; Urban Libraries Council further comments at 7-12; NTIA submission at 14-16.

[1749] National Coalition for the Homeless further comments at 8. National Coalition for the Homeless states, for example, that "[o]nly 31 percent of all schools with poor children have access to the Internet compared to 62 percent of schools with affluent students." *Id.*

[1750] Public Advocates comments at 18-19 and Exhibit 5 (asserting that "[p]erhaps the most critical issue here is designing policies that ensure that schools, [and] libraries . . . in poor communities achieve levels of access equal to those in wealthy communities. Policies that perpetuate the status quo will merely deepen the disparities

that the infrastructure problems are greater in urban schools, and asserts that to deny access to urban students in resource-poor schools "will negatively affect their educational opportunities, their employment prospects, and help reproduce economic disparities between those who have technological proficiencies and those who do not."[1751] New Jersey Advocate maintains that schools and libraries in economically disadvantaged areas are likely to be most in need of access to the Internet and the information superhighway,[1752] and, therefore, most likely to need additional assistance. At a recent Federal-State Joint Board meeting, United States Representative Major Owens emphasized the need to provide greater discounts to economically disadvantaged schools and libraries.[1753]

526. The Senate Working Group, referring to both the principles of section 254(b) and the provisions of section 254(h)(1)(B), states that the Commission and the Joint Board must formulate a "discount mechanism" that takes into consideration what economically disadvantaged schools and libraries can "reasonably afford."[1754] The Senate Working Group urges that the discounts should be implemented in a manner that ensure all schools and libraries have access to telecommunications and information services.[1755] Moreover, in a letter to the Joint Board, a group of 26 Senators asserts that "[a]ffordability must be defined so that the discounted rates are related to a school's or library's ability to pay," and discounts must be "real, significant and meaningful."[1756] The Senators also contend that we should "not create a division of 'haves' and 'have nots' in the Information Age when it comes to the educational uses of schools and libraries."[1757]

527. U.S. Distance Learning Ass'n states that justification for providing additional assistance to disadvantaged schools and libraries can be found in the principles of section 254

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that are presently occurring"). *See also* Black Community Crusade for Children reply comments at 1-2 (stating that "[s]tudents who are poor clearly have less access than their better-off peers to these increasingly fundamental tools, and when poor students do have access, it is more often for routine drill and practice than for the kind of advanced-level programming offered to students in more affluent schools").

[1751] AFT comments at 3-4.

[1752] New Jersey Advocate comments at 22.

[1753] Testimony of United States Representative Major Owens before the Federal-State Joint Board on Universal Service (Oct. 17, 1996).

[1754] Senate Working Group further comments at 2-3.

[1755] Senate Working Group further comments at 2.

[1756] Letter from 26 Senators to Members of the Joint Board (Sept. 26, 1996).

[1757] Letter from 26 Senators to Members of the Joint Board (Sept. 26, 1996).

of the 1996 Act, which state that any discount methodology established by the Commission must be specific, predictable, and sufficient,[1758] and that rates should be affordable.[1759] New Jersey Advocate similarly focuses on the concept of affordability when it asserts that "there is an obvious correlation between the income of residents of an area, their ability to afford basic, as well as advanced, services that are included in the definition of universal service, and the ability of schools and libraries serving these areas to afford those services."[1760] AFT contends that, in order to provide equal access to telecommunications services at just, reasonable, and affordable rates, schools serving large populations of poor students will require discount rates greater than other schools.[1761]

528. Commenters suggest various ways that additional assistance could be administered for disadvantaged schools and libraries. Some commenters, for example, contend that a sliding-scale approach would be the most equitable way to proceed.[1762] NSBA I supports a system under which "[t]he amount of the subsidy would be proportional to the amount by which the average income in the district falls below the national average, so that an area with only 25 percent of the national average income would pay only 25 percent of the discounted price."[1763] Great City Schools also supports providing discounts in direct proportion to the ability to pay.[1764] Other commenters support using a step approach to allocate an additional discount to disadvantaged schools and libraries, under which the discount would not need to be adjusted for every change in the percentage of children from economically disadvantaged families.[1765] Commenters suggest basing a step-approach model

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[1758] U.S. Distance Learning Ass'n comments at 15-16 (*citing* 47 U.S.C. § 254(b)(5)).

[1759] U.S. Distance Learning Ass'n comments at 16 (*citing* 47 U.S.C. § 254(b)(1)).

[1760] New Jersey Advocate comments at 22.

[1761] AFT comments at 3.

[1762] *See, e.g.*, CFA further comments at 11; EDLINC further comments at 40-41; MAP further comments at 7-8; MCI further comments at 9; NECA further comments at 14-15; Western Alliance further comments at 4;. *See also* U.S. Distance Learning Ass'n comments at 13-17 (supporting either a sliding scale approach or a Lifeline-type program).

[1763] NSBA I comments at 24. *See also* Great City Schools comments at 2 (stating that, "[i]n recognition of the direct relationship between the ability to pay even a discounted rate and the overriding principle of access, the Commission should consider establishing discount rates in declining amounts for schools in direct proportion to their ability to pay such rates").

[1764] Great City Schools comments at 2. Great City Schools supports basing any model on data provided by the Department of Education. *Id.*

[1765] *See, e.g.*, NECA comments at 15-16; U.S. Distance Learning Ass'n comments at 13-17; TCI further comments at 19.

on either the three-step national school lunch program[1766] or the two-step Lifeline and Link-Up programs currently available to needy residential customers.[1767] PacTel, for example, asserts that a step approach is easier to apply and administer than a sliding scale.[1768]

529. Consistent with its approach to providing a supplemental discount to high cost schools and libraries, EDLINC acknowledges that the discount formula it proposes may not be sufficient for certain economically disadvantaged school districts, so it proposes "that each state PUC have the authority to order lower discounts if a district is able to demonstrate that the standard discount . . . does not yield an affordable price."[1769] If a school's telecommunications expenditures exceed one percent of its total expenditures, EDLINC asserts that the school should be eligible for an additional discount, in an amount to be determined by the state PUC. Federal universal service mechanisms would fund two-thirds of the additional discount, and state universal service mechanisms would fund the remaining one-third.[1770]

530. Several commenters suggest ways to define disadvantaged schools and libraries. U.S. Distance Learning Ass'n defines disadvantaged schools and libraries as "those which are situated in communities which, according to U.S. census income data, are in the lowest 20 percentile in terms of income."[1771] New Jersey Advocate also supports consideration of income and the ability of the underlying populations to pay for advanced services in determining whether a school is disadvantaged.[1772] Great City Schools advocates considering a school's ability to pay, or in the alternative, the rate of poverty in the school district.[1773] Some commenters support using eligibility requirements from the national school lunch program as a model for providing an additional universal service discount to disadvantaged

[1766] 42 U.S.C. § 1758.

[1767] U.S. Distance Learning Ass'n comments at 17. Several other commenters support a Lifeline approach. *See, e.g.*, NSBA I comments at 23-24; AFT comments at 6; U.S. Distance Learning Ass'n comments at 17. The Lifeline Assistance Plan and the Link-Up American Program are discussed in detail at section VIII *supra*.

[1768] PacTel further comments at 26-27.

[1769] EDLINC further comments at 38.

[1770] EDLINC further comments at 38-39.

[1771] U.S. Distance Learning Ass'n comments at 16.

[1772] New Jersey Advocate comments at 22.

[1773] Great City Schools comments at 1-2.

schools and libraries.[1774] Under the national school lunch program, a child is either eligible for no assistance, a reduced price lunch, or a free lunch.[1775] A child whose family income is between 130 percent and 185 percent of applicable family size income levels contained in the nonfarm poverty guidelines prescribed by the Office of Management and Budget is eligible for a reduced price lunch. A child whose family income is 130 percent or less of applicable family size income levels contained in the nonfarm income poverty guidelines prescribed by the Office of Management and Budget is eligible for a free lunch.[1776]

531. AFT supports determining eligibility on a formula such as the one used to distribute federal educational funding under Title I of the Elementary and Secondary Education Act of 1965 (Title I),[1777] which relies on Census Department poverty data, eligibility for AFDC, or participation in the national school lunch program, to determine whether a school is disadvantaged.[1778] AFT argues that basing eligibility on such existing programs would not be administratively burdensome because school officials have used such poverty data for decades.[1779] PacTel supports basing eligibility requirements on poverty data provided by the Department of Education.[1780] TCI and the Urban Libraries Council assert that any model used should be based on the wealth of all inhabitants in a school district or within a library's service area, rather than based just on the wealth of the students enrolled in a school district.[1781]

[1774] *See, e.g.*, MCI further comments at 10; New York DOE further comments at 10; NYNEX further comments at 16.

[1775] 42 U.S.C. § 1758(b).

[1776] 42 U.S.C. § 1758(b).

[1777] 20 U.S.C. § 6301. The Improving America's Schools Act of 1994 (P.L. 103-382) reauthorized the Elementary and Secondary Education Act of 1965. *See* United States Department of Education, *Policy Guidelines for Title I, Part A -- Improving Basic Programs Operated by Local Educational Agencies* at i (April 1996).

[1778] AFT comments at 4. *See also* NSBA I comments at 23 (supporting use of Census Bureau data or some other appropriate state or federal formula). Title I is a federal program that provides financial assistance aimed at helping disadvantaged students meet academic content and student performance standards. *See* United States Department of Education, *Policy Guidelines for Title I, Part A -- Improving Basic Programs Operated by Local Educational Agencies* at i (April 1996).

[1779] AFT comments at 6. *See also* ALA further comments at 17-18; USTA further comments at 16; U S West further comments at 11.

[1780] PacTel further comments at 26.

[1781] TCI further comments at 19; Urban Libraries Council further comments at 12-14.

532. Some commenters oppose providing additional support to economically disadvantaged schools and libraries.[1782] Ameritech, for example, asserts that the 1996 Act does not contemplate any such additional discount.[1783] MFS contends that "[i]t is inappropriate and beyond the scope of the Telecommunications Act to require telecommunications companies and telecommunications customers to bear the burden of financing economically disadvantaged schools."[1784]

533. Existing Special Rates. Some commenters support requiring the carriers to offer to schools and libraries already receiving special rates the lower of that special rate or the discounted rate offered pursuant to section 254.[1785] Florida PSC, for example, asserts that the federal discount should be applied to the rate that would be charged in the absence of any special rate, and the state should be free to further discount that rate.[1786] CFA maintains that carriers should not be able to collect universal service support for any services currently being offered at a special rate.[1787] Some commenters caution that schools and libraries should be precluded from receiving double support, once through existing special rates and again through any new discount programs.[1788] RUS, on the other hand, asserts that discounts offered pursuant to section 254 should be applied on top of any low rates that schools and libraries were previously able to secure. RUS adds that the goal should be to encourage service providers to offer services to schools and libraries, and service providers already offering special rates to schools and libraries should not be placed at a competitive disadvantage.[1789]

[1782] *See, e.g.*, AT&T further comments at 16; Ameritech further comments at 21; Information Renaissance further comments at 9-10; MFS further comments at 31-32; Time Warner further comments at 24-25.

[1783] Ameritech further comments at 21. *See also* Washington UTC further comments at 13 (asserting that "[t]he discount mechanism is limited to the circumstances set out in Section 254(h)(1) and should not be expanded").

[1784] MFS further comments at 31-32.

[1785] *See, e.g.*, GCI further comments at 7; NCTA further comments at 5-6; Oakland School District further comments at 17; TCI further comments at 18.

[1786] Florida PSC further comments at 13.

[1787] CFA further comments at 9-10.

[1788] AirTouch further comments at 18; ITC further comments at 8.

[1789] *See, e.g.*, Information Renaissance further comments at 9; NCTA further comments at 5-6; New York DOE further comments at 9; TCI further comments at 18; Union City Board of Education further comments at 4, 13.

534. Interstate and Intrastate Discount Harmonization. A few commenters address interstate and intrastate harmonization of discount mechanisms.[1790] Netscape, for example, maintains that "the Commission should declare in this proceeding that all Internet communications and Internet access services are jurisdictionally interstate, and preempt state public service commission regulation of the Internet."[1791] Netscape bases this argument on its interpretation that, under the jurisdictional classification rule for mixed-use local exchange carrier special access services, Internet access services are interstate, "even though the user's 'link' to the network is physically intrastate."[1792] BellSouth suggests that "the public interest would best be served if the federal universal service support mechanisms [were] also [ ] sufficient to cover state-designated discounts for intrastate services where the state has not adopted 'additional definitions and standards' within the meaning of [s]ection 254(f) or appropriate funding mechanisms."[1793] Some commenters assert that states should be able to further discount any federally discounted services.[1794] New York DPS, on the other hand, asserts that state and federal discount methodologies need not be harmonized because the majority of services will likely be intrastate in nature and recovery of revenues will fall primarily to the states.[1795] In addition, New York DPS maintains that the 1996 Act does not require that state and federal discount methodologies be harmonized.[1796]

3. Discussion

a. Pre-discount Price

535. As a preliminary matter, we note that the pre-discount price is significant for two reasons. First, it is the total price that carriers would receive for the services they sell to schools and libraries. While schools and libraries would only pay the carrier a discounted rate, the carrier would receive the amount of the discount from universal service support mechanisms. Therefore, the pre-discount price is the price of most significance to providers

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[1790] *See, e.g.*, Apple comments at 6; Florida PSC comments at 2-3, 4-5, 8; Netscape comments at 21; .

[1791] Netscape comments at 21.

[1792] Netscape comments at 21 (*citing* 47 C.F.R. § 36.154(a) and *MTS and WATS Market Structure*, 4 FCC Rcd. 5660 (1989) for the premise that "a facility with at least ten percent interstate usage is classified as interstate for separations, regulation and tariffing purposes").

[1793] BellSouth comments at 22.

[1794] *See, e.g.*, Florida PSC reply comments at 2-3, 4-5, 8; West Virginia Consumer Advocate reply comments at 5-7.

[1795] New York DPS comments at 8.

[1796] New York DPS comments at 8.